

**REMARKS**

As a preliminary matter, it is noted that the Examiner has not initialed **USP No. 6,057,564** included in the Information Disclosure Statement filed on December 17, 2003. A copy of the IDS provided by the Examiner is attached hereto. It is respectfully requested that the Examiner provide Applicants another initialed copy of the IDS indicating that *each* of the prior art references cited therein have been considered and made of record.

Claims 10-12 stand rejected under 35 U.S.C. § 103 as being unpatentable over the publication authored by Hashizume et al. ("Hashizume") in view of the publication authored by Liu et al. ("Liu"). Claim 10 is independent. This rejection is respectfully traversed for the following reasons.

Claim 10 recites in pertinent part, "thermally oxidizing a Group III nitride semiconductor layer to form a thermally oxidized insulating film on a surface of the Group III nitride semiconductor layer" (emphasis added). The Examiner relies on Hashizume as allegedly disclosing this feature of the claimed invention. However, the Examiner does not identify the specifically relied on portions of Hashizume. In this regard, when imposing a prior art rejection, the Examiner is required to point to "page and line" wherein an applied reference is perceived to identically disclose each feature of a claimed invention. *In re Rijckaert*, 9 F.3d 1531, 28 USPQ2d 1955 (Fed. Cir. 1993); *Lindemann Maschinenfabrik GMBH v. American Hoist & Derrick Co.*, 730 F.2d 1452, 221 USPQ 481 (Fed. Cir. 1984). It is respectfully submitted that the Examiner has failed to do so in the instant case.

In any event, it is respectfully submitted that the Examiner's interpretation of Hashizume is incorrect. As shown in Figure 6 of Hashizume and the corresponding disclosure therefore (partial English translation of Hashizume attached hereto for the Examiner's convenience), a Al metal layer is first formed on the alleged Group III nitride semiconductor layer AlGa<sub>N</sub> and thereafter the combined Al/AlGa<sub>N</sub> layer is annealed to form AlO<sub>x</sub>. Accordingly, the initial AlO<sub>x</sub> is NOT formed via thermal oxidation. In the next step, the *Al metal layer* is thermally oxidized, NOT the alleged Group III nitride semiconductor layer as recited in claim 10. Indeed, Hashizume expressly discloses that the initial AlO<sub>x</sub> formed on the alleged Group III nitride semiconductor layer AlGa<sub>N</sub> functions as a reaction barrier layer for preventing oxygen radicals from the reaching the underlying AlGa<sub>N</sub> layer. In this regard, therefore, Hashizume actually teaches away from thermally oxidizing *a Group III nitride semiconductor layer* as recited in claim 10.

The Examiner is directed to MPEP § 2143.03 under the section entitled "All Claim Limitations Must Be Taught or Suggested", which sets forth the applicable standard for establishing obviousness under § 103:

To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. (citing *In re Royka*, 180 USPQ 580 (CCPA 1974)).

In the instant case, the pending rejection does not "establish *prima facie* obviousness of [the] claimed invention" as recited in claim 10 because the proposed combination fails the "all the claim limitations" standard required under § 103.

Under Federal Circuit guidelines, a dependent claim is nonobvious if the independent claim upon which it depends is allowable because all the limitations of the independent claim are contained in the dependent claims, *Hartness International Inc. v. Simplimatic Engineering Co.*,

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819 F.2d at 1100, 1108 (Fed. Cir. 1987). Accordingly, as claim 10 is patentable for the reasons set forth above, it is respectfully submitted that all claims dependent thereon are also patentable. In addition, it is respectfully submitted that the dependent claims are patentable based on their own merits by adding novel and non-obvious features to the combination.

In this regard, it is respectfully requested that withdrawn claims 13-14 be rejoined as being dependent on allowable claim 10.

Based on the foregoing, it is respectfully submitted that all pending claims are patentable over the cited prior art. Accordingly, it is respectfully requested that the rejection under 35 U.S.C. § 103 be withdrawn.

### **CONCLUSION**

Having fully responded to all matters raised in the Office Action, Applicants submit that all claims are in condition for allowance, an indication for which is respectfully solicited. If there are any outstanding issues that might be resolved by an interview or an Examiner's amendment, the Examiner is requested to call Applicants' attorney at the telephone number shown below. To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,  
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